

No 39.

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CARADOC and SEVERN  
VALLEY FIELD CLUB.

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RECORD OF BARE FACTS,  
FOR THE YEAR 1929.

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*A List of the More Noteworthy  
Observations made by Members  
of the Caradoc and Severn  
Valley Field Club and others.*

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1930.

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| Bridge.                         |                                     |

The names printed in italics after occurrences recorded are those of the observers.

The names of Meteorological observers are given in the first table under that head.

# BOTANY.

## PHANEROGAMIA (FLOWERING PLANTS).

N.B.—Roman numerals refer to the thirteen Botanical Sub-divisions of the County, as portrayed upon the Caradoc Special Map.

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Dr. Cosmo Melvill was called away before he had prepared his Report for the past season. At the request of Mr. H. E. Forrest I have made use of the various notes and records which had been forwarded to Dr. Melvill and which were available by the kindness of Mrs. Melvill.

The material of the following list is mainly due to the efforts of Miss E. R. Lloyd (Gobowen) and Mr. George Potts (Benthall) who are to be congratulated on their enthusiastic efforts. It may be well to mention that the nomenclature is, in the main, that of the last edition of the *London Catalogue*. Dr. Cosmo Melvill referred in the closing paragraph of his last report (*Bare Facts*, 1928), to the need for more working members. In emphasising this appeal it is to be hoped that there may be some active workers and especially amongst the Club's junior members who will respond. There are doubtless some who have not yet taken up the special study of any branch of Natural Science. To such we would urge the claims of Botany. Work of this kind, as indeed in all branches of Natural Science, brings an increasing pleasure and reward to its devotees.

Dr. Cosmo Melvill succeeded the late Rev. W. H. Painter as Botanical Recorder in 1910. The long record in *Bare Facts* during the past twenty years is only one evidence of the valuable work which our friend accomplished. On coming to Shropshire (1903/4) he found a select committee which worked hard for some years in preparing and completing a new and compendious *Flora of Shropshire*. The manuscript was practically completed, subscriptions were invited and a considerable sum was promised.

The Rev. W. A. Leighton's *Shropshire Flora*, a pioneer undertaking and a most excellent work in many ways, had appeared as far back as 1841, and there was considerable need for a more recent treatise. The European War and other circumstances prevented the fruition of the undertaking, but it is greatly to be hoped that some effort should be made to secure the publication of this important work.

Dr. Cosmo Melvill was keenly interested in the project. He went through the MS. in 1913-4, just before the War, and added considerable further matter. In the course of a correspondence on the subject a short time since he wrote me (January 30, 1929) " . . . . It is just as we left it about 10 years ago and only wants a little more writing up and adding the Caradoc Club additions and could be published after that was done."

The publication of the new *Flora of Shropshire* should not be a difficult matter. So valuable an addition to scientific knowledge would also form an apposite memorial to the various devoted workers who laboured so diligently in its preparation.

A. A. DALLMAN

(Editor *North Western Naturalist*).

**Clematis Vitalba, L.**

VIII, XII. Lane at The Wood Farm, Buildwas (S. side of the Severn). Also in profusion on the Cliffs below the N.E. side of the Castle Walk, Bridgnorth. *G. Potts*.  
Regarded as rare in Salop (*vide* Leighton's *Flora*).

**Nasturtium palustre, D.C.**

I. Ebnal Pool, Gobowen. A new station. *Miss E. R. Lloyd*.

**Erysimum orientale, Mill.=perfoliatum, Crantz.**

VIII. In disused fowl run at Tickwood. *G. Potts*.

**Diplotaxis muralis, D.C.**

VIII, XII. In disused fowl run at Tickwood. Also railway siding at Iron-Bridge and stone steps at Benthall. *G. Potts*.

**Reseda lutea, L.**

VIII, X. In disused fowl run at Tickwood. Also at Presthope. *G. Potts*.

**Saponaria Vaccaria, L.**

VIII. Plentifully in disused fowl run at Tickwood (*per Mrs. Heywood*) *G. Potts*. A cornfield weed of Eastern and Central Europe which is sometimes cultivated for its ornamental flowers. *Dallman*.

**Silene noctiflora, L.**

VIII. In disused fowl run at Tickwood. *G. Potts*.

**Lychnis Githago, Scop.**

VIII. With other waifs and strays in the disused fowl run at Tickwood. *G. Potts*.

**Geranium pyrenaicum, L.**

III. Llanymynech. *Miss E. R. Lloyd*. The occurrence of this species confirms Dr. Melvill's suggestion in last year's *Bare Facts* (p. 5).

**Impatiens Roylei, Walp.=I. glandulifera, Royle.**

I. *Miss E. R. Lloyd*'s record of this species (*Bare Facts*, 1927, p. 4) reminds me that I observed it about the same portion of the River Dee, on both banks (Shropshire and Denbighshire) in 1914. It was then abundant both here and elsewhere along the Dee. A Birkenhead botanist (Mr. H. S. Marsh) had noted it in quantity here in 1910 so the date of its introduction must have been considerably earlier. I had recorded it as plentiful elsewhere in Denbighshire in 1910 (see *Journal of Botany*, 1911, Supplement, pp. 16-17). It would be of interest to know of any earlier record of its occurrence as a naturalised species in Shropshire or North Wales. This is now thoroughly established in many parts of Britain. I noticed it forming miniature thickets in places along the Dee in 1914. There are two colour forms here, with pink and white flowers respectively. *Dallman*.

***Vicia sylvatica*, L.**

VIII.—XII. Bradley Wood, near Much Wenlock. Much increased since first noticed 27 years ago. *G. Potts*.

***Meililotus arvensis*, Wallr.=*officinalis*, Lam.**

VIII. In disused fowl run at Tickwood. *G. Potts*.

X. Presthope. *G. Potts*.

***Anthyllis Vulneraria*, L.**

VIII.—X. In small quantity in headland of cultivated field next to the Edge Wood, Presthope. *G. Potts*.

This is close to, if not identical with, a station mentioned by Leighton who records this calcicole species from several places in the Wenlock Edge area. *Dallman*.

***Scandix Peeten-Veneris*, L.**

VIII.—X. Plentifully in one field at top of the Edge Wood at Presthope. *G. Potts*.

***Sambucus Ebulus*, L.**

X. Mr. Potts reports that though almost exterminated by tree-planting in the old station near Middlehope (see Leighton, p. 136), it has succeeded in crossing the lane and is now spreading northwards.

***Pulicaria dysenterica*, Gray.=*Inula dysenterica* L.**

XII. Abundant in lanes and wet places near Nordley. *G. Potts*.

***Bidens tripartita*, L.**

I. Ebnaal Pool, Gobowen. *Miss E. R. Lloyd*.

***Chrysanthemum segetum*, L.**

II. Still in the field at Rednal (see *Bare Facts* for 1928, p. 6), but in lesser amount as the field was down with Sugar Beet. *Miss E. R. Lloyd*.

***Centaurea solstitialis*, L.**

XII. A solitary plant as a casual at Broseley. *G. Potts*.

***Legousia hybrida*, Delarbre.=*Specularia hybrida*, DC.**

VIII.—X. Plentifully in one field at top of the Edge Wood at Presthope. *G. Potts*.

***Anagallis tenella*, Murr.**

VIII. Homer. *G. Potts*.

***Echinosperrum Lappula*, Lehm.=*Lappula echinata*, Gilib.**

VIII. In disused fowl run at Tickwood. *G. Potts*.

The generic designation is very suggestive of the burr type of structure which is well adapted for being widely transported. Often imported with foreign grain and wool. *Dallman*.

*Linaria minor*, Def. = *L. viscida*, Moench.

- VIII.—X. Plentifully in several fields at top of the Edge Wood at Presthope. *G. Potts*.  
This colonist evinces a marked partiality for railway ballast. *Dallman*.

*Pedicularis palustris*, L.

- VIII. Homer. *G. Potts*.

*Origanum vulgare*, L.

- X. Middlehope. *G. Potts*.

*Euphorbia exigua*, L.

- III. Trefonen, Oswestry. *Miss E. R. Lloyd*.

*Populus nigra*, L.

- VI. A tree in a field at Bettws-y-Crwyn, near Clun. *Miss Blower*.  
Leaves were submitted to Dr. J. C. Melvill who wrote, "A tree now widely planted, and, though native, most often seen where it has been so treated."

*Listera ovata*, Br.

- I. Cragnant, Ebna, and elsewhere. *Miss E. R. Lloyd*.  
III. Llynclys and Llanymynech Hill. *Miss E. R. Lloyd*.

*Epipactis palustris*, Sw.

- VIII. Homer, plentifully. *G. Potts*.

*Epipactis latifolia*, Sw. = *Helleborine latifolia*, Druce.

- I. Cragnant, Ebna, and elsewhere. *Miss E. R. Lloyd*.  
III. Llynclys and Llanymynech Hill. *Miss E. R. Lloyd*.

*Anacamplis pyramidalis*, Rich. = *Orchis pyramidalis*, L.

- III. Llynclys and Llanymynech Hill. *Miss E. R. Lloyd*.

*Orchis morio*, L.

- I. Cragnant. *Miss E. R. Lloyd*.  
III. Llynclys and Llanymynech Hill. *Miss E. R. Lloyd*.

*Gymnadenia conopsea*, Br.

- I. Cragnant. *Miss E. R. Lloyd*.  
III. Llynclys and Llanymynech Hill. *Miss E. R. Lloyd*.  
VIII. Homer, plentifully. *G. Potts*.

*Coeloglossum viride*, Hartm. = *Habenaria viridis*, R. Br.

- I. Cragnant. *Miss E. R. Lloyd*.  
III. Llynclys and Llanymynech Hill. *Miss E. R. Lloyd*.

*Platanthera bifolia*, Reich fl. = *Habenaria bifolia*, R. Br.

- III. Llynclys and Llanymynech Hill. *Miss E. R. Lloyd*.

**Fritillaria Meleagris, L.**

- XII. *G. Potts* in *North Western Naturalist*, IV, 135. In a field adjoining the one in which former Amies Manor House, near Broseley, once stood (demolished about 50 years ago). As the plant is said to have grown in an enclosure adjoining the house it is probably the remains of former cultivation, although the plant is now to be found 300 yards from where the house stood.

**Paris quadrifolia, L.**

- VIII. Whitwell, near Homer. *G. Potts*.

## ZOOLOGY.

The severe frost towards the end of February, 1929, had a marked effect on the bird population of our district. It killed a large number of the residents, and brought down many visitors from the north. Amongst the latter was a small party of the Greylag Goose on the Severn at Bridgnorth; this, strange to say, is the rarest of the wild geese in Shropshire. At the same time a small party of Kittiwakes came to Shrewsbury and stayed on the Severn for a week; I have seldom before known Kittiwakes to come in except when storm-driven, and then only single birds. Three Goosanders and many Tufted Ducks came to the Severn at Atcham in January and stayed for several weeks. Both Fieldfares and Redwings were fewer than usual, and the latter (as also the Mistle Thrush) were thinned by the frost. Other species which suffered were the Robin, Goldcrest, and Long-tailed Tit, but less severely than in 1921. Large numbers of immigrant Song Thrushes passed down the Aberystwyth coast at the end of February; some remained about there till March 19th.

In July there was a fresh influx of Crossbills into this country; flocks numbering up to 40 were noted at Church Stretton, Wenlock Edge, and in Wyre Forest; also in Wales, near Corwen and Lake Vyrnwy. As some of those which came in 1927-8 are still with us, there must be a good number of Crossbills in this country, some of which will surely nest here. Large flocks of immigrant Wood Pigeons were noted in the Wenlock district in November, and again in January, 1930.

The gales which swept the country in November and December blew inland numbers of Petrels, which were found dead or dying in many places; in our district one Fork-tailed Petrel near Shrewsbury; one Barmouth; and two Aberystwyth.

Among the migrant birds there are some remarkably early arrivals recorded:—Swallow on 2nd, 5th, and 6th April; Cuckoo, April 4th; and Swift, 25th, 26th, and 27th April; one Swift stayed as late as August 24th.

Amongst the more noteworthy records for the past year are the following:—Marsh Tit at Dolgelley and Aberystwyth—distinctly rare in Western Wales. Twite, seen on the Longmynd in summer, may have been breeding there, though no nest was found. Lesser Spotted Woodpecker and Long-eared Owl near Aberystwyth, rare in the west. Little Owl has extended its range to Anglesey. Hen Harrier seen in Anglesey and at Benthall in November. A Hobby killed near Bridgnorth in June. Among the water-fowl which came in November were small parties of Whooper and Bewick's Swan in Anglesey, and a Grey Phalarope at Deganwy, whilst in October a Red-necked Phalarope visited Anglesey. The Long-tailed Duck which came to the Dovey estuary the previous winter stayed till January 30th. Many Pochard came into Shropshire during the February frost, three being found dead at Bridgnorth, but a still more interesting record is that of a pair seen on the Denbighshire moors on May 21—a date on which they might possibly be nesting. A Garganey also was seen at Harlech on August 18th. Redshanks nested and reared broods near Atcham, and on the Tern at Rushmoor. Quail were reported in several places in Shropshire, and Red-legged Partridges at Bridgnorth, Aberdovey, and Lampeter. Fourteen of the Turtle Doves which nest regularly in the garden of Mrs. Steavenson at Bicton Heath arrived in a body on May

9th; this implies that they had kept together in their foreign winter-quarters, wherever these were. Three Red-necked Grebe were seen on the Menai Straits in October, while several Black-necked Grebe visited the Dovey estuary during the frost of January-February.

Amongst mammals there has been a marked increase in the number of Polecats in Merioneth, while in Bridgnorth district the Squirrel seems to have recovered almost its former numbers.

H. E. FORREST.

## MAMMALS.

**Sorex araneus** (Common Shrew). *Potts*. April 14, two dead, Broseley.  
**Mustela putorius** (Polecat). *Bible*. Jan. 17, one flushed out of rabbit warren by ferret. Dec. 20, keeper reports one trapped Aberdovey making fortieth in three years. *Daily Mail*, 14 Nov. Five killed nr. Bala within fortnight.

**Halichoerus grypus** (Grey Seal). *Bible*. Mar. 27, dead, Aberdovey. October several washed up dead after gales.

**Sciurus vulgaris** (Squirrel). *Bible*. Few Aberdovey. *Pitt*. Plentiful again Bridgnorth district, both sides of Severn.

**Muscardinus avellanarius** (Dormouse). *Pitt*. Quite disappeared from Bridgnorth district.

**Apodemus sylvaticus flavicollis** (Yellow-necked Mouse). *Pitt*. Had several, including fine male from Millichope.

**Cervus elaphus** (Red Deer). *Dr. E. Greenby* in his *Geology of Anglesey*, II., p. 799, records antlers found in Llyn-y-Parc when it was being cleared for Beaumaris waterworks. First actual record for Anglesey.

## BIRDS.

**Turdus philomelos** (Song Thrush). *Potts*. Mar. 24, nest two eggs, Broseley. *Rope*. Dec. 16, singing, Mawley. *Salter*. Feb. 25, large number immigrants Aberystwyth; a good many still here March 19.

**T. musicus** (Redwing). *Potts*. Oct. 28, Broseley. *Bible*. Nov. 3, one Aberdovey: 40 to 50 on 10th. *Elliott*. 1st, Dowles. *Salter*. Last seen March 15; first seen Nov. 1, Aberystwyth. Suffered during Feb. frost.

**T. pilaris** (Fieldfare). *Potts*. April 13, a few Wenlock Edge. *Forrest*. Nov. 17, Bayston Hill first seen. *Elliott*. 22nd, Dowles. *Salter*. March 1, pecked at swedes during frost. Many observers noted that Fieldfares were much fewer than usual in winter of 1929. Redwings also were fewer, but not so markedly.

**T. torquatus** (Ring Ouzel). *Salter*. March 19, Aberystwyth. *Congreve*. 31st, Trefnant.

**Enanthe enanthe** (Wheatear). *Congreve*. March 10, Trefnant. *Bible*. 11th, Towyn. *Salter*. 10th, Aberystwyth: five on 16th, both sexes. *Backhouse*. 18th, Arthog. *Thomas*. April 4, several males, Criccieth. *Elliott*. 24th, Dowles, very tame. *Forrest*. June 19, fledged broods, Church Stretton.

**Saxicola rubetra** (Whinchat). *Congreve*. April 30, Trefnant. *Potts*. May 4, Broseley: not seen for years. *Salter*. 3rd, Aberystwyth.

- S. torquata** (Stonechat). *Forrest*. June 19, fledged broods, Church Stretton. *Elliott*. Oct. 21, one by Severn, Dowles. *Salter*. Numbers reduced by frost, Aberystwyth.
- Phoenicurus phoenicurus** (Redstart). *Elliott*. Apl. 21, Dowles. *Backhouse*. 22nd, Arthog; getting scarcer. *Salter*. 26th, Machynlleth. *Congreve*. 23rd, Trefnant.
- Erithacus rubecula** (Robin). *Bible*. White one except few brown feathers on back obtained Radnorshire, 1927. *Salter*. During frost one attacked weakly Chaffinch and, after it was dead, fed on its flesh; Aberystwyth.
- Luscinia megarhyncha** (Nightingale). *Potts*. Apl. 23, Broseley. 30th, one singing mid-day. *Gepp*. May 2, Pulley. *Potts*. 24th, nest four eggs, Shifnal.
- Sylvia communis** (Whitethroat). *Elliott*. Apl. 22, Dowles. *Thomas*. 27th, one Abergele; number much reduced. *Bible*. 29th, one with nesting materials, Aberdovey. *Forrest*. May 9, Shrewsbury. *Lang*. 1st, Ludlow. *Salter*. Apl. 28, Aberystwyth.
- S. curruca** (Lesser Whitethroat). *Thomas*. May 11, Abergele; fewer than 1928. *Salter*. 18th and 19th one heard Tresaith; but the one which usually sings close to own garden not heard till June 5; then at intervals till July 5. *Congreve*. Apl. 23, Trefnant.
- S. atricapilla** (Blackcap). *Thomas*. Apl. 17, Abergele, and *Elliott*, Dowles. *Bible*. May 3, Aberdovey. *Thomas*. More numerous than 1928; ten nests Abergele. *Salter*. Apl. 26, Llyfnant Valley.
- S. borin** (Garden Warbler). *Thomas*. Apl. 27, one Abergele: as numerous as 1928. *Penrose*. July. Common Lake Vyrnwy. *Elliott*. May 5, Dowles and Aberdovey. *Bible*.
- Phylloscopus collybita** (Chiffchaff). *Salter*. March 18, Aberystwyth. *Bible*. 19th, one Aberdovey. *Thomas*. 20th, Abergele. *Elliott*. 22nd, Dowles. *Chitty*. 23rd, Yockleton. *Potts*. 24th, Wenlock; 26th, Buildwas. *Lang*. 27th, Ludlow. *Bible*. Sept. 11 and 13 Aberdovey. *Salter*. 29th, Aberystwyth. *Penrose*. July, not common on Lake Vyrnwy. *Congreve*. March 22, Trefnant.
- P. trochilus** (Willow Wren). *Congreve*. Apl. 2, Trefnant. *Thomas*. 4th, two Criccieth; 17th, several Abergele. *Bible*. 8th pair; male burst into song. *Potts*. 9th, Willey. *Backhouse*. 17th, Arthog. *Forrest*. 18th, Bayston Hill: numerous 20th. *Lang*. 20th, Ludlow. *Elliott*. 9th, Dowles; Sept. 5, in song.
- P. sibilatrix** (Wood Wren). *Thomas*. Apl. 28, one male, Abergele; several 29th. *Backhouse*. 29th, Arthog. *Potts*. May 13, Broseley. *Penrose*. July, not common Lake Vyrnwy. *Lang*. May 6, Ludlow. *Elliott*. 2nd, Dowles.
- Acrocephalus schoenobaenus** (Sedge Warbler). *Bible*. Apl. 29, Aberdovey. *Thomas*. 30th, Abergele; number much reduced. *Backhouse*. May 2, Arthog. *Elliott*. 8th, Dowles.
- Locustella naevia** (Grasshopper Warbler). *Potts*. May 20, Broseley; very scarce of late years. *Salter*. Apl. 27, Clarach Bay, Aberystwyth. *Congreve*. May 9, Coed Talon, Flintshire.
- Prunella modularis** (Hedge Sparrow). *Thomas*. May 26, nest six eggs, Trefnant. *Salter*. Nov. 16 and Dec. 27, singing, Aberystwyth.

- Aegithalus caudatus** (Long-tailed Tit). *Bible*. Nov. 24, three separate parties Aberdovey. *Penrose*. July. Only one seen Lake Vyrnwy. *Salter*. Thinned by frost, but fair number after breeding season, Aberystwyth. *Wenner*. Not reduced by frost Corwen district.
- Parus palustris** (Marsh Tit). *Backhouse*. Dec. 30, pair Dolgelley; distinctly rare here. *Salter*. Nov. 25, one Glascoed, Aberystwyth; not seen here for some years.
- Sitta europæa** (Nuthatch). *Oldham*. Apl. 17, pair nesting Coed Coch, near Colwyn; 18th, one Dyffryn Aled. *Bather*. Pair constant visitors to bird-table, Meole Vicarage. *Penrose*. July. Common about Lake Vyrnwy. *Salter*. Noted in several localities Aberystwyth; may be increasing.
- Motacilla alba** (White Wagtail). *Oldham*. Apl. 17, three mouth of Afon Dulas, nr. Llandudno; 19th, about twenty Llanfairfechan shore. *Elliott*. Sept. 10, male, Dowles.
- M. flava rayi** (Yellow Wagtail). *Oldham*. Apl. 19, one with White W., Llanfairfechan. *Backhouse*. May 2, Arthog; none later. *Congreve*. 9th, Coed Talon, Flintshire.
- Anthus trivialis** (Tree Pipit). *Elliott*. Apl. 9, Dowles. *Thomas*. 23rd, three Abergele. *Potts*. 25th, two Coalport. *Bible*. 27th, Aberdovey. *Salter*. 26th, Llynant Valley.
- A. petrosus** (Rock Pipit). *Backhouse*. Apl. 30, pair Llwyngwrl.
- Lanius collurio** (Red-backed Shrike). *Elliott*. Aug. 20, immature, Dowles. Party of five next day. *Salter*. One seen Aberdovey, but finding no mate, left. May 28, male, Dolgelley.
- Muscicapa striata** (Spotted Flycatcher). *Salter*. May 17, Aberystwyth. *Bible*. 26th, Aberdovey. *Elliott*. 14th, Aug. 27, Dowles.
- M. hypoleuca** (Pied Flycatcher). *Salter*. Apl. 24, Devil's Bridge. *Thomas*. 23rd, male, Abergele; left after few days. *Potts*. 29th, male in garden, Ironbridge. *Penrose*. July, Common Lake Vyrnwy.
- Hirundo rustica** (Swallow). *Chitty*. April 2, two Yockleton. *Bible*. One at Abermule. *Salter*. 6th, Borth. *Lang*. 11th, Ludlow. *Elliott*. 12th, four, Dowles. *Fulcher*. 14th, one Shrewsbury. *Potts*. 16th, two large flocks, Broseley (some about each day afterwards), seen same day Arthog (*Backhouse*) and Abergele (*Thomas*). *Oldham*. 17th, Llanddulas, *Sankey*. Breaton, *Bather*. 18th, Meole. Many observers, from 25th onwards. *Bible*. Oct. 1, three Aberdovey. *Rope*. 5th, two Cleobury Mortimer. *Thomas*. 15th, two hawking flies Llanrwst. *Smythe*. Four broods reared in one nest, Pimley Manor. *Orton*. Three broods Aber; incubating three eggs Oct. 1st.
- Delichon urbica** (House Martin). *Elliott*. Apl. 16, Dowles. *Bather*. 18th, Meole. *Bible*. 19th, Aberdovey, and *Thomas*, Abergele. *Forrest*. Sept. 12, about 100 on wires, Bayston Hill, closely packed. *Potts*. Up to Oct. 11, Broseley; two passing 18th. *Bible*. Oct. 1, three, and Nov. 16, three, Aberdovey; late date. *Lang*. Apl. 29, Ludlow. *Salter*. Apl. 12, Glascoed, Aberystwyth—early date.
- Riparia riparia** (Sand Martin). *Salter*. March 22, two on Rheidol, Aberystwyth. *Elliott*. April 5, about 30, and 9th, several passing N. up Severn, Dowles. *Forrest* and others. 7th, Shrewsbury. *Potts*. 9th, lot Bridgnorth; and at Jackfield 10th and 12th. *J. C. Wright*. 10th, five Cressage. *Congreve*. 19th, Trefnant.

- Carduelis carduelis** (Goldfinch). *Bible*. Numerous Aberdovey; 22 on Jan. 23rd. *Backhouse*. Increasing Barmouth district. *Salter*. Feb. 3, unusually large charm of about 40, Aberystwyth.
- C. linaria** (Lesser Redpoll). *Bible*. Nov. 21, reported Machynlleth.
- C. spinus** (Siskin). *Elliott*. Nov. 23, flock about 40, Dowles. *Thomas*. Dec. Five Abergele for a fortnight.
- C. flavirostris** (Twite). *Cadman*. May 16, party on Longmynd. *Forrest*. 30th. One seen there.
- C. cannabina** (Linnet). *Thomas*. May 6, Nest 5 eggs on ground in Marram Grass, Abergele; unusual position.
- Loxia curvirostra** (Crossbill). *Potts*. Jan. 25, two Wykey; Nov. 9, about twenty, Benthall Edge. Dec. 9, about twelve on larches, Linley. *Sparrow*. July 5, flock 30 to 40, Church Stretton. *Harding*. Aug. 3, seven there. *Penrose*. July, small flock Lake Vyrnwy. *Elliott*. July 7, party of ten passing W. over Dowles. August 20, onwards, parties seen; 28 in two parties Sept. 3. *Wenner*. In July party 25 to 30 appeared Corwen and were about till September.
- Coccothraustes coccothraustes** (Hawfinch). *Thomas*. Winters Abergele.
- Plectrophenax nivalis** (Snow Bunting). *Salter*. Feb.-March 4, Aberystwyth; during frost one in harbour several days.
- Sturnus vulgaris** (Starling). *Thomas*. May 28, pure white young bird being fed by parent among flock on field, Abergele.
- Pyrhocorax pyrrhocorax** (Chough). *Bible* and *Salter*. Seen repeatedly Aberdovey in January; 4 on 14th, and again on October 22nd; eight seen by Capt. Manney Wynn; seen several places Aberystwyth district.
- Garrulus glandarius** (Jay). *Backhouse*. Much on increase Barmouth district.
- Corvus corax** (Raven). Pair used old Buzzard's nest; Aberystwyth; frequent along Cardigan coast.
- Lullula arborea** (Woodlark). *Salter*. Singing Jan. 20; also in March and April, and again in October, Cardiganshire.
- Apus apus** (Swift). *Elliott*. Apl. 25, Dowles. *Bather*. 27th, two Meole and *Cottam*, Oswestry. *Chitty*. 29th, Yockleton. *Forrest*. May 1, 8 a.m., one passing N. Bayston Hill. *Gepp*. 2nd, Shrewsbury; apparently resident. *Potts*. 3rd, Brosely and *Fulcher*, Shrewsbury. *Thomas*. 4th, Abergele. *Stanley*. Aug. 18, ten Kingsland. *Bible*. Seen Aberdovey up to 21st; twenty on 18th August. *Cottam*. 24th, Oswestry. *Morris*. 29th, one Shrewsbury. *Forrest*. These are very late dates; bulk left Shrewsbury very early—before 4th August. *Lang*. May 2, Ludlow. *Salter*. Apl. 26—Aug. 18, Aberystwyth. *Congreve*. May 2, Trefnant.
- Caprimulgus europæus** (Nightjar). *Elliott*. The felling of timber in Wyre Forest has brought a great influx of Nightjars into the cleared areas. May 17, first seen, Dowles. *Salter*. May 27, one passing Llanbadarn, Aberystwyth.
- Dendrocopus minor** (Lesser Spotted Woodpecker). *Salter*. March 29, one in avenue to Gogerddan House, Aberystwyth. *Thomas*. Throughout the winter Abergele; one seen and heard 14 Jan., 1930. *Congreve*. Much reduced by frost, but one seen Trefnant, Jan. 1930.
- Iynx torquilla** (Wryneck). *Potts*. May 2, Coalport. *Elliott*. Apl. 25, Dowles.

**Cuculus canorus** (Cuckoo). *Ellicott*. Apl. 18, Dowles, and *Bather*, Meole. *Sanhey*. 19th, Boreatton. *Potts*. 20th, Broseley. *Backhouse*. 21st, Arthog. *Thomas*. 22nd, Abergele. June 10, egg in Robin's nest with 5 eggs. June 13th another nest quarter-mile away with newly hatched Cuckoo and 1 Robin's egg on ground. *Fulcher*. May 1, Shrewsbury; sang major third in D. *Forrest*. 2nd, Bayston Hill. *Cottam*. June 23 last heard, Oswestry. *Lang*. Apl. 27, Ludlow. *Salter*. Apl. 4, one Llandoverly (early arrival), but main body arrived 21st; last heard Aberystwyth June 20.

**Athene noctua** (Little Owl). *Orton*. Nov. 3, pair Anglesey. New record for Anglesey. *Lang*. Sept. 27, two Ludlow. *Salter*. Occurs Glascoed, Lampeter, and Tresaith. *Pitt*. Too numerous, Bridgnorth; yet pair under observation seemed harmless as, judging by castings they ate only earthworms, beetles, mice, and Shrews. *Wenner*. Marked increase Corwen district; often seen 1000 ft. elevation.

**Tyto alba** (Barn Owl). *Thomas*. May 10, one seen on pigeon's nest top of small fir tree, Abergele, eating two young pigeons. *Pitt*. Disappeared from Bridgnorth district.

**Asio otus** (Long-eared Owl). *Salter*. Nov. 8, heard its "oo-oo-oo-oo" Aberystwyth; scarce here.

**Circus cyaneus** (Hen Harrier). *Orton* in "*British Birds*." Nov. 7. One Malldraeth, Anglesey; pursued by Peregrine. *Potts*. Another—believed this species—seen Benthall about same date.

**Buteo buteo** (Buzzard). *Potts*. Apl. 13, Wenlock Edge. *Backhouse*. Much on increase Barmouth district, and (*Salter*) Aberystwyth. A pair on Cader Idris repeatedly swooped at observer and passed close overhead with a loud "swish."

**Milvus milvus** (Kite). *Salter*. Four pairs brought off young. In a free fight between Kites, Buzzards, and Crows, an old female Kite was killed: sent to Kensington Museum.

**Falco subbuteo** (Hobby). *Shelbrooke*. June 26, male shot Wheathill, Bridgnorth.

**Ardea cinerea** (Heron). *Fulcher*. Dec. 9—11. One came repeatedly to the flooded part of the Quarry, Shrewsbury, although driven off by Rooks.

**Botaurus stellaris** (Bittern). *Daily Mail*. Jan. 26, one shot Ruabon. *Bible*. About March 29, one seen Towyn.

**Anser anser** (Greylag Goose). *Shelbrooke*. End of Feb. One shot out of five on Severn, Bridgnorth. Rarely obtained Shropshire.

**A. albifrons** (White-fronted Goose). *Potts*. Jan. 25; flock about 40 passed over Broseley, probably this species; several smaller flocks later.

**Cygnus cygnus** (Whooper). } *Orton*. In November small parties  
**C. bewickii** (Bewick's Swan). } of both species visited Anglesey.

**Anas platyrhynchos** (Mallard). *J. H. Owen* in "*British Birds*." One sitting in Crow's 1928 nest 30 feet above ground at Pool Quay.

**A. acuta** (Pintail). *Bible*. Apl. 13, a few Aberdovey.

**A. querquedula** (Garganey). *J. D. Wood*, in "*British Birds*." Aug. 18, one seen Harlech.

**Spatula clypeata** (Shoveler). *Oldham*, Apl. 17, pair on sea, Llandulas. *Bible*. Two young males shot Towyn during winter.

**Nyroca ferina** (Pochard). *Cartwright*. Jan., Feb., Many on Severn, Atcham. *Shelbrooke*. Three dead in frost, end of Feb., Bridgnorth. *Thomas*. May 21, pair on Denbigh Moors; late date—nesting?

- N. fuligula** (Tufted Duck). *Cartwright*. Jan.-Feb. Many on Severn, Atcham. Pair reared brood Betton Pool: new locality for nesting. *Bible*. Jan. 31. On River Dysynni, Towyn. *Potts*. Apl. 22, Atterley, Wenlock.
- Clangula hyemalis** (Long-tailed Duck). *Bible*. The two females recorded in December 1928 stayed Aberdovey till Jan. 10th; one on 30th.
- Oidemia nigra** (Scoter). *Fraser*. Sept. 5, one shot on Severn at Cressage.
- Mergus merganser** (Goosander). *Cartwright*. Jan.-Feb. 1 male and 2 females on Severn, Atcham.
- M. serrator** (Red-breasted Merganser). *Bible*. Apl. 18, last noted Aberdovey; Oct. 7 first return.
- Columba palumbus** (Wood Pigeon). *A. C. Jones*. Sept. 29, nest two fresh eggs, Rushmoor. *Potts*. Nov. 16, between two and three thousand passing Broseley; great numbers in woods on 26th.
- C. oenas** (Stock Dove). *Backhouse*. Uncommon Arthog district; pair seen Llanfachreth, May 31.
- Streptopelia turtur** (Turtle Dove). *Forrest*. Apl. 27, two, Shrewsbury. May 9, fourteen arrived together at Bicton Heath and fed with Mrs. Steavenson's tame pigeons. *Thomas*. May 2, Abergele. *Potts*. 16th, Broseley. *Bible*. August, four seen Broncrug, Towyn, by Capt. Nanney Wynn. *Backhouse*. heard Harlech. *Elliott*. Apl. 30, Dowles. *Salter*. May 21, Lampeter. *Lort*. Sept. 6, one in garden, Menai Bridge. 3rd record, Anglesey. *Congreve*. May 2, Trefnant.
- Lyrurus tetrrix** (Black Grouse). } *Penrose*. July, both common on  
**Lagopus scoticus** (Red Grouse). } Lake Vyrnwy.
- Alectoris rufa** (Red-legged Partridge). *Shelbrooke*. Sept. 20, pair Loughton, Bridgnorth. *Bible*. October, one shot Aberdovey; had been seen feeding with poultry on small farm. *Salter*. One caught in spring near Lampeter.
- Coturnix coturnix** (Quail). *P. A. Fraser*. Sept. 20, One shot Cressage. *Forrest*. Others reported Bridgnorth; one shot Worfield by Mr. A. E. Lander.
- Orex crex** (Corncrake). *Backhouse*. Apl. 23, one killed telegraph wires, Barmouth; two or three pairs nested in district. *Bible*. May 12. More numerous than usual this year Aberdovey. *Cottam*. May 2—July 7, Oswestry. *E. T. Armstrong*. 13th, Lea Cross. *Potts*. 20th, Buildwas. *Lang*. June 20, Ludlow.
- Rallus aquaticus** (Water Rail). *Backhouse*. May 23, seen Barmouth Junction. *Salter*. March 12. Watched one probing mud with bill, and flicking its tail up till vertical or inclined over its back, showing white tail coverts.
- Porzana porzana** (Spotted Crake). *Masefield*, in "British Birds." Oct. 8. One Longton, Staffs.
- Gallinula chloropus** (Moor Hen). *Thomas*. Apl. 25. Six eggs in last year's nest in thorn bush 14 ft. above pool, Abergele.
- Charadrius apricarius** (Golden Plover). *Elliott*. Oct. 16, a lot with Peewits, Condoover. *Penrose*. July, three seen Lake Vyrnwy. *Thomas*. Much scarcer than usual Abergele this winter, and about Denbigh (*Congreve*).
- Phalaropus fulicarius** (Grey Phalarope). *Hamilton*. Nov. 1—5, one Deganwy.
- P. lobatus** (Red-necked Phalarope). *Orton*. Oct. 17, one watched on same llyn in Anglesey where a grey Phalarope was seen Oct. 17, 1926.

- Scelopax rusticola* (Woodcock). *Potts*. Apl. 13, two together foot of Wenlock Edge. *Thomas*. 24th, one Abergele.
- Erolia canutus* (Knot). *Bible*. Feb. 16-17, several Aberdovey. *Salter*. Sept. and Oct. Small flock in estuary.
- E. maritima* (Purple Sandpiper). *Salter*. Small flock spends winter on rocks in front of Aberystwyth College. Nov. 2, one; 7th five; and eight subsequently.
- Tringa hypoleuca* (Sandpiper). *Bible*. Apl. 16, Aberdovey. *Lang*. 24th, Ludlow. *Elliott*. 26th, four together, Dowles. *Salter*. 21st, Rheidol.
- T. totanus* (Redshank). *Walker*. Pair nested Paradise Meadow, Atcham; brood well fledged May 30. *A. C. Jones*. Nested Rushmoor, on Tern.
- Limosa lapponica* (Bar-tailed Godwit). *Bible*. Feb. 28, one Aberdovey; stayed several days.
- Numenius arquata* (Curlew). *Salter*. March 10, calling at night on the way to hills, Aberystwyth.
- N. phaeopus* (Whimbrel). *Salter*. May 3, several Ynyslas, and number on 16th. Aug. 12, rippling whistle heard on return migration.
- Sterna sandvicensis* (Sandwich Tern). *Oldham*. Apl. 17th, 11-15 a.m., three pairs and 1 or 2 single birds fishing in sea Llandulas; all ultimately went off W. along coast.
- S. hirundo* (Common Tern). *Bible*. May 3, several Aberdovey.
- S. albigrons* (Lesser Tern). *Walker*. May 30, pair on Severn fishing above Atcham Bridge. *Backhouse*. Very few Terns this year Barmouth district, but several pairs Lesser T. nested. *Bible*. May 12, Aberdovey; egg on 26th.
- Larus ridibundus* (Black-headed Gull). *Bible*. Apl. 14, about 1000 Aberdovey. *Cottam*. Dec. 26, large number with Peewits, etc., on fields nr. Oswestry. *Salter*. In February frost, came right up to door for food, Aberystwyth.
- L. argentatus* (Herring Gull). *Bible*. June 4, one seen to kill Eel 12 inches long, and bring it to land repeatedly when it returned to water, Aberdovey.
- L. canus* (Common Gull). *Shelbrooke*. End of Feb., two killed in frost, Bridgnorth. *Salter*. During frost fed with sheep on swedes, Aberystwyth.
- L. fuscus* (Lesser Black-backed Gull). *Bible*. Apl. 14, sixteen Aberdovey. *Oldham*. 15th, about fifty among Herring Gulls on Great Orme's Head; doubt if any nested there twelve years ago.
- L. marinus* (Great Black-backed Gull). *Penrose*. July, seen passing over Lake Vyrnwy.
- Rissa tridaactyla* (Kittiwake). *Gepp*. Six on Severn, Coton Hill, for about a week end of February—hard frost.
- Colymbus arcticus* (Black-throated Diver). *Llew. Rees*. May 3, saw several large divers with white underparts and thick necks, Aberdovey; probably this species.
- C. stellatus* (Red-throated Diver). *Shelbrooke*. One obtained Bridgnorth in February frost. *Salter*. Feb. 26, one shot Towyn. *Bible*. May 5, several still on Aberdovey bar.
- Podiceps griseigena* (Red-necked Grebe). *Orton*. Oct. 31, three on Menai Straits. Noted also each year since 1925.
- P. nigricollis* (Black-necked Grebe). *Bible*. Jan. 5—10, one Aberdovey, two Feb. 16. *Salter*. For several days in Aberystwyth harbour during frost of Feb.—March.

- Oceanodroma leucorhoa** (Fork-tailed Petrel). *Huxley*. Nov. 23, one brought in Shrewsbury, found dead. *Backhouse*. One killed, telegraph wires, Barmouth, after great gale of Dec. 10th. *Salter*. Also two Aberystwyth. *British Birds*. Many others (as well as Storm Petrels) in various places.
- Puffinus puffinus** (Manx Shearwater). *Bible*. May 3, several Aberdovey.

## FISHES.

- Caranx trachurus** (Scad). *Bible*. Dec. 13. One about 3 lbs. washed up dead Aberdovey after great gale.
- Abramis brama** (Bream). *Tower*. June. A number of both, and of the hybrid between the two (=Pomeranian Bream) caught Ellesmere Mere. *Cartwright*. The frequent occurrence of this hybrid is due to the fact that both species spawn at the same time—in June—later than any other freshwater fish, and the milt of the male may fertilize the ova of either species with which it comes into contact. The males do not actually consort with females of the other species.
- Leuciscus rutilus** (Roach).

## ENTOMOLOGY.

A few records have been sent in for 1929. Mr. Geo. Potts, our principal contributor, has sent a list of observations in the Benthall district. He notes

- P. Rapae** (Small White Butterfly). March 28. An early date.  
**Thecla Rubi** (Green Hairstreak). Benthall, May 19.  
**E. hyperanthus** (Ringlet). Very abundant. July 14.  
**Chaerocampa Elpenor** (Elephant Hawk Moth) Larva at Benthall.  
**C. Edusa** (Clouded Yellow Butterfly). June 12. Reported by Mr. Lang, Ludlow.  
**Ellopias prasinaria** (Barred Red-Green variety), imago (two), Middletown Hill. June.  
**Cardamines** (Orange Tip) and **L. Argiolus** (Holly-Blue) were noted on Kingsland, April 19. Early date.

## COLEOPTERA.

Mr. Barnes has kindly sent a list of nineteen species, new to Shropshire, which brings the total number of species to 1,112.

He wishes to acknowledge his indebtedness to Mr. J. R. le B. Tomlin, M.A., F.E.S., for assistance in naming the more difficult species.

## DIPTERA.

Mr. Wallace Pugh has sent a sixth list of Shropshire Diptera, consisting of 53 additional species, bringing the total number recorded (including Mr. Bury's list) to 775 species.

W. S. INGRAMS.

## LEPIDOPTERA.

Reported by Mr. Geo. Potts, Broseley, unless otherwise stated.

- Pieris rapae** (Small White Butterfly). Benthall, Mar. 28, early date.  
**L. Argiolus** (Holly Blue). Kingsland, April 19. *Ingrams*.  
**A. Cardamines** (Orange Tip). Kingsland, April 19. *Ingrams*.  
**Thecla Rubi** (Green Hairstreak Butterfly). May 19, seen in Benthall Edge (as in 1928).  
**Noctua plecta** (Flame Shoulder Moth). June 10 and 13. Benthall.  
**Miana fasciuncula** (Middle-Barred Minor). June 16. Benthall.  
**A. Cardamines** (Orange Tip). Linley, late date, none seen for some weeks before June 18.  
**C. Edusa** (Clouded Yellow). Ludlow, June 12. *J. G. Lang*.  
**Ellopias prasinaria** (Barred Red-Green variety) imago. June, Middletown Hill. *H. H. Hughes*.  
**E. hyperanthus** (Ringlet Butterfly). Very abundant in rough fields between Farley and Trapp's Rock, near Much Wenlock. July 7. Dowles. *J. Steele Elliott*.  
**E. tithonius** (Large Heath Butterfly). A few in same locality. July 14.  
**G. C-album** (Comma Butterfly). One at Homer, July 14.  
 One at Cuckoo's Nest, nr. Rushbury, Aug. 29.  
 One at Benthall, Oct. 12. One at Church Stretton, Sept. 30. *Harding*.  
**Chaerocampa Elpenor** (Elephant Hawk Moth) larva at Benthall. Aug. 30.

- P. Egeria** (Speckled Wood Butterfly). Plentiful in Benthall Edge, both top and bottom. One in garden at Benthall House for about a week at this time, Aug. 30.  
**Acherontia atropos** (Death's Head Hawk Moth), two larvae, 1 yellow, 1 green). Potato field, Upton Magna. Oct. *Hughes*.  
**A. Plexipus** (Milkweed). Uffington. *Rev. E. R. Sequeira*.

## COLEOPTERA.

Nineteen species new to Shropshire have been met with, bringing the total for the County to 1,112 species.

Mr. J. R. le B. Tomlin, M.A., F.E.S., has again kindly helped by naming the more difficult species.

*Abbreviations* :—(*Pts.*)—Recorded by G. Potts.

(*T.*)— " J. R. le B. Tomlin.

(*B.*)— " A. J. Barnes.

All the following are new records for Shropshire, unless marked with asterisk (\*).

|                                        |                                                                                                      |                 |
|----------------------------------------|------------------------------------------------------------------------------------------------------|-----------------|
| <b>Agabus bipustulatus</b> , L.        | Benthall, June                                                                                       | ( <i>Pts.</i> ) |
| <b>Microglossa suturalis</b> , Sahl.   | Benthall, haystack refuse, April                                                                     | ( <i>Pts.</i> ) |
| <b>Cilea silphoides</b> , L.           | Benthall, June                                                                                       | ( <i>Pts.</i> ) |
| <b>Philonthus sordidus</b> , Gr.       | Shrewsbury, flood refuse, Dec.                                                                       | ( <i>B.</i> )   |
| do. <b>ventralis</b> , Gr.             | Benthall, July.                                                                                      | ( <i>Pts.</i> ) |
| <b>Xantholinus tricolor</b> , F.       | Wenlock Edge, August                                                                                 | ( <i>Pts.</i> ) |
| <b>Sunius diversus</b> , Aub.          | Benthall, haystack refuse, April                                                                     | ( <i>Pts.</i> ) |
| <b>Megarthus affinis</b> , Mull.       | Benthall, March                                                                                      | ( <i>Pts.</i> ) |
| <b>Anisotoma calcarata</b> , Er.       | Benthall, June                                                                                       | ( <i>T.</i> )   |
| <b>Silvanus surinamensis</b> , L.      | Benthall, in house, August                                                                           | ( <i>Pts.</i> ) |
| <b>Cryptophagus saginatus</b> , Stm.   | Benthall, June                                                                                       | ( <i>Pts.</i> ) |
| do. <b>acutangulus</b> , Gyll.         | Benthall, June                                                                                       | ( <i>Pts.</i> ) |
| do. <b>bicolor</b> , Stm.              | Benthall, in house, March                                                                            | ( <i>Pts.</i> ) |
| <b>Florinus musaeorum</b> , L.         | Shrewsbury, in house, June                                                                           | ( <i>B.</i> )   |
| <b>Cis nitidus</b> , Hbst.             | Benthall, June                                                                                       | ( <i>Pts.</i> ) |
| <b>Crepidodera Transversa</b> , Marsh. | Benthall, July                                                                                       | ( <i>Pts.</i> ) |
| <b>Apion Haematodes</b> , Kirb.        | Benthall, August                                                                                     | ( <i>Pts.</i> ) |
| <b>*Liosoma ovatum</b> , Clair.        | One specimen of the variety<br><b>collaris</b> , Rye. was taken in the<br>Benthall district in 1928. | ( <i>Pts.</i> ) |
| <b>Trachodes hispidus</b> , L.         | Caughley, July.                                                                                      | ( <i>Pts.</i> ) |
| <b>Rhinoneus castor</b> , F.           | Haughmond, May.                                                                                      | ( <i>B.</i> )   |

## SHROPSHIRE DIPTERA.

### SIXTH SUPPLEMENTAL LIST, 1929.

All taken at or near Oswestry by C. H. Wallace Pugh unless otherwise stated.

#### CECIDOMYIDAE

**Perrisia ulmariae** (Bremi.) Bred from galls on Meadowsweet.

**P. erataegi** (Winn.) Common on Hawthorn, early spring.

#### MYCETOPHILIDAE

**Bolitophila spinigera** (Edw.) 1 f. 24 Mar.

**Diadocia ferruginea** (Mg.)

**Sciara longispina** (Petty.) 1 m. Candy. 9 May.

**Phthinia Winnertzii** (Mik.) 1 m. Candy Woods. 21 Aug.

**BIBIONIDAE**

*Scatopse fuscipes* (Mg.) Not uncommon, May, July, Aug.

**CHIRONOMIDAE**

*Forcipomyia tenuisquama* (Kieff.)

*Chironomus pictulus* (Mg.) Common, banks of R. Vyrnwy, Molverley, 25 May.

*Phaenopsectra flavipes* (Mg.) Banks of R. Vyrnwy, Molverley, 25 May.

*Tanytus phatta* (Egg.) Banks of R. Vyrnwy, Molverley, 25 May.

**ORPHNEPHILIDAE**

*Orphnephila testacea* (Ruthe). Stiperstones, 30 March.

**PSYCHODIDAE**

*Psychoda albipennis* (Ztt.) Bred in numbers, stable manure, March.

*Pericoma trifasciata* (Mg.) Common wet ditches, May.

*P. nubila* (Mg.) 1 m., 1 f. Candy, 5 May.

*P. trivialis* (Eat.) Common wet ditches, May.

*P. canescens* (Schin.) Common, hedgerows, April, May.

*P. neglecta* (Eat.) Fairly common, April, May.

*P. gracilis* (Eat.) Common near water, May.

**DIXIDAE**

*Dixa nubilipennis* (Curt.) 1 m., 9 Oct.

**LIMNOBIDAE**

*Gonomyia simplex* (Tonn.) 1 m. July.

*Ilisia areolata* (Subke.) Common banks R. Vyrnwy, Molverley, 25 May.

*Hexatoma fuscipennis* (Curt.) Common wet shingle, R. Vyrnwy, Molverley, 25 May.

**TIPULIDAE**

*Tipula Pierrei* (Tonn.) R. Vyrnwy, Molverley, 25 May.

*T. rufina* (Mg.) 1 m., several females, autumn.

**STRATIOMYIDAE**

*Chorisops tibialis* (Mg.) Numerous males flying under beech trees.

**TABANIDAE**

*Haematopota crassicornis* (Whibg.) Males occasionally round gate posts.

**SCENOPINIDAE**

*Scenopinus fenestralis* (L.) 2 f., windows, Sept. (*J. Hignett*).

**EMPIDAE**

*Hilara carinthiaca* (Strobl.)

*Heleodromia fontinalis* (Hal.) 1 m., 1 f., Stiperstones, well, 30 Mar.

*Hydrophorus borealis* (Lw.) Whixall Moss, peat ditches, 17 Sept.

*H. nebulosus* (Fln.) 1 m. Whixall Moss, peat ditches, 17 Sept.

**DOLICHOPODIDAE**

*Xiphandrium monotrichum* (Lw.)

*Porphyrops nasuta* (Fln.) 1 m., Molverley, 30 May, wet mud.

*P. elegantula* (Mg.) 1 m. do. do.

*P. micans* (Mg.) several, do. do.

*Campsicnemus scambus* (Fln.) several, Whixall Moss, wooded swamp, 17 Sept.

**PLATYZEIDAE**

*Callimyia speciosa* (Mg.) 1 m., Aug.

*Platycnema pulicaria* (Fln.) 1 m.

**PIPUNCULIDAE**

*Pipunculus ater* (Mg.) 1 f., window, 8 Sept.

*P. semifumosus* (Kow.)

= *flavipes* (Mg.) 1 f., window, 8 Sept.

*P. fuscipes* (Ztt.) 1 m., Oct.

**SYRPHIDAE**

*Chrysotoxum arcuatum* (L.) Cragmant, Selattyn, Sept.  
(*J. Hignett*).

**TACHINIDAE**

*Actia bicolor* (Mg.) Bred from pupae taken from larvae of Oak  
Eggar Moth. (*J. Hignett*).

**ANTHOMYIDAE**

*Pegomya squamifera* (Stein). 3 f., Whixall Moss, 14 Sept.

*Hylemyia setierura* (Rnd.) 1 m., Morda, 8 July.

**ACALYPTRATAE**

*Sciomyza dubia* (Fln.) Several, Candy Woods, June.

*Loxocera albiseta* (Schrk.) 1 m., Morda Brook, 31 Aug.

*Tephritis leontodontis* (L.) 1 m., May.

*Oethera mantis* (Deg.) Whixall Moss, peat ditches, Sept.

**PHORIDAE**

*Phora rufipes* (Mg.) Windows, April.

*Aphiochaeta vernalis* (Wood). Windows, March.

# METEOROLOGY.

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I have to record with much regret the loss of two observers during the year, they having left the county, namely, the Rev. Alan Clover, of Woolstaston Rectory, and Mr. R. E. Serjeantson, of Newington House, Craven Arms. Both were much valued observers, of long standing, sending in full reports, with interesting notes as to local weather phenomena. The observation station at Woolstaston is one of the oldest, its records going back some 60 years, and I hope that the interruption may only be temporary. Against these losses must be set the addition of two stations whose records will prove to be of the greatest value and interest. These are the Harper Adams Agricultural College, near Newport, and the Monkmoor Isolation Hospital, Shrewsbury. Both these stations are fully equipped as recognised meteorological stations, and their records will provide reliable standards of rainfall and temperature records for their areas. I am much indebted to Dr. C. Crowther, Principal of the College, and to Dr. A. D. Symons, medical superintendent of the hospital, for the opportunity, kindly given, to include these records. It is of interest to record that the Monkmoor Hospital is a new station, completely equipped by the Shropshire Horticultural Society, as a first-class observation station, and was opened at the end of June. The weather of 1929 may be summed up briefly as interesting but satisfactory. The outstanding features were the drought conditions of the first four months of the year, the intense frosts and cold of mid-February, and the abnormally heavy rainfall of the last quarter of the year—in nearly all stations the amount being considerably more than half the year's total—bringing the total up to nearly average, thus restoring the balance, and replenishing wells and springs before the earlier drought had disastrously damaged supplies. The summer was genial, and harvests good, the heavy rains coming at a time when it was less desirable to spend long hours out of doors. The agricultural and gardening reports show a generally satisfactory condition of their affairs.

M. GEPP.

## MONTHLY NOTES, 1929.

Notes on the chief features of the weather of each month are furnished by—No. (17) W. Bayliss, Esq., Bridgnorth; No. (24) Harper Adams College; No. (25) J. W. Nowell, Esq., Roden.

## JANUARY—

(17) Wind chiefly E. or N.E. Snow 5th, 6th, 8th, 9th, 17th, 27th. (24) Ground frost 18 days, lowest minimum on grass 18°F. on 27th. Fog (at observation hour) 5 days. Snow fell on 6 days, lying 8 days. (25) Wintry conditions, snow, sleet and frost.

## FEBRUARY—

(17) Wind chiefly E. or S.E., very cold, snow 25th. (24) Ground frost 20 days, lowest on grass 6°F. on 15th; Fog (at observation hour) 5 days. Snow fell on 2 days, lying 3 days (25) Dry but very cold, East winds.

## MARCH—

(17) Wind chiefly N.E. to E., warm month, 105°F. in sun 29th. (24) Ground frost 21 days, lowest on grass 13° on 1st. Fog (at observation hour) 7 days. No snow. (25) Very mild in daytime but sharp frosts at night.

## APRIL—

(17) Wind chiefly E. or N.W. Snow 12th. Gale 1st. (24) Ground frost 13 days; lowest reading 19°F. on 21st. (25) Mild in day but sharp frosts.

## MAY—

(17) Wind W. or S.W. till 17th, then E. (24) Ground frost 2 days, lowest reading 27°F on 3rd. Thunder heard 3 days. hail 1 day. (25) Sharp frost early in month with hailstorm.

## JUNE—

(17) Wind W. or N.W. till 24th, then E., thunder 14th, with heavy hailstorm; .50 rain and hail fell in 10 minutes. (24) Ground frost 3 days, lowest reading 24°F. on 3rd; thunder heard 1 day, hail 1 day. (25) Showery early part, then very dry.

## JULY—

(17) Wind chiefly W. 108°F in sun 14th. (24) Thunder heard 1 day. (25) Very hot month.

## AUGUST—

(17) Wind chiefly W. to N.W.; thunder 31st. (24) Ground frost 2 days, lowest reading 27°F. on 19th. (25) Showery most of month.

## SEPTEMBER—

(17) Wind chiefly N.W. 115°F in sun on 8th, very hot.  
 (24) Ground frost 7 days, lowest reading 18°F. on 14th. Fog  
 (at observation hour) 1 day. Thunder heard 1 day. (25)  
 Hot days, dry, and some frosts.

## OCTOBER—

(17) Wind W. or N.W. ; gales 1st, 5th and 23rd ; heavy  
 rain 5th. (24) Ground frost 7 days, lowest reading 21°F. on  
 27th. Gale 1 day ; sunshine 108 hours. (25) Stormy and  
 wet month.

## NOVEMBER—

(17) Wind W. or N.W., a very stormy month. (24)  
 Ground frost 11 days, lowest reading 18°F. on 15th. Fog (at  
 observation hour) 4 days. Sunshine 59.4 hours. (25) Stormy  
 month.

## DECEMBER—

(17) Wind chiefly W. ; big gales all through month.  
 (24) Ground frost 10 days, lowest reading 22°F. on 16th. Fog  
 (at observation hour) 3 days. Gale 3 days. Snow fell 1 day.

NOTES ON THE WEATHER AS AFFECTING CROPS,  
ETC.

*Mr. G. T. Watson, Burwarton Hall Gardens.*—Ideal weather  
 throughout the season ; all crops of vegetables and fruits  
 did well.

*Major W. H. B. Whitaker, Totterton Hall.*—Despite very dry  
 spring weather rain fell exactly when wanted for hay  
 crops. Result, an abundance of excellent hay. Grain  
 crops above average ; roots up to average. Despite  
 severe gales not much damage has been done to trees.  
 Wild pheasants good ; partridges patchy. Trout fishing  
 poor.

*W. Swire, Esq., C.B.E., Longden Manor.*—There is no doubt  
 that the sap in the fruit trees rose in the spring, and then  
 had a sudden check and receded, before rising again.  
 This can be seen in the badly formed apples and pears.

*V. S. Wrigley, Esq., Diddlebury Hall.*—Hay, light crop but  
 well got. Grain, fair crops well harvested. Roots, a very  
 moderate crop.

*Mr. J. Chard, Sanson Gardens.*—Bush fruits very good crop, especially black currants. Apples only a fair crop, suffered from drought. All green vegetable crops good. Potatoes a very heavy crop, and clean.

*Rev. W. Brewster, Fitz Rectory.*—Good apple crop but a little small. The drought did little harm in garden.

The following notes received from the Harper Adams College, through the kind courtesy of the Principal, Dr. C. Crowther, are of special value and interest as giving an authoritative review of the year's weather as regards agriculture.

### CEREALS—

**WINTER WHEAT.**—Thinned in many fields by hard winter. Picked up well: average crop.

**WINTER OATS.**—Only in exceptional cases did any survive the winter.

**SPRING OATS AND BARLEY.**—Mainly short in the straw through the drought, some 'drying out' taking place on the lighter soils. Value of sugar beet for the succeeding crop shown up in this dry season, the following cereal being of good length straw and normal ripening, good crop. Oats and barley average crop, except where dried out on the lighter soil.

### ROOTS—

**SUGAR BEET.**—Weather excellent for preparation of tilth, more especially on heavier lands. Wilting of tops common during drought. Greater proportion than usual of crop harvested earlier in fine dry weather, giving very high sugar percentage. Latter part of season crop pulled under bad weather conditions; lower sugar content and high dirt tare. Heavier crop than at start of season.

**MANGELS.**—As with sugar beet, excellent tilth. Cleaning through the season carried out under very good conditions as regards weather. Wilting general through the drought. The extremely dry September was responsible for a disappointing growth of bulb. In August it seemed as if the crop would be extra heavy, but the dry September checked the growth.

**SWEDES.**—Tilth difficult to obtain owing to extremely dry conditions. Growth very slow owing to drought. Rain of October too late to be of much benefit. Light crop.

## EXTREMES.

|                                                      |     |       |
|------------------------------------------------------|-----|-------|
| Greatest Rainfall in 24 hours, Bromfield, Oct. 5     | ... | 2.05  |
| " " " " " Alveley, Oct. 5                            | ... | 1.82  |
| Greatest total fall during year, Church Stretton     | ... | 36.45 |
| " " " " " Bishop's Castle                            | ... | 36.13 |
| Least total fall during year, Shrewsbury, Coton Hill | ... | 22.57 |
| Greatest number of rainy days, Oswestry Reservoir    | ... | 179   |
| " " " Norton-in-Hales                                | ... | 175   |
| " " " Church Stretton                                | ... | 174   |
| Least number of rainy days Oakly Park                | ... | 130   |
| " " " Burwarton                                      | ... | 131   |
| " " " Bitterley                                      | ... | 131   |
| Lowest Temperature, Bridgnorth, Feb. 14              | ... | 6°F.  |
| " " " Roden, Feb. 14                                 | ... | 7°F.  |
| Highest Temperature, Bridgnorth, July 16, 21         | ... | 89°F. |
| Wettest months—October, November, December.          |     |       |
| Driest months—February, March, April, September.     |     |       |

M. GEPP.

# TABLE No. I.

## NAMES OF OBSERVERS AND STATIONS.

| NO.  | ALTITUDE.<br>FEET. | STATION.                 | OBSERVER.                             | LATITUDE.<br>° ' " | LONGITUDE.<br>° ' " |
|------|--------------------|--------------------------|---------------------------------------|--------------------|---------------------|
| (1)  | 894                | Burwarton                | ... Mr. G. T. Watson                  | ... 52 27 30       | 3 34 0              |
| (2)  | 720                | Bishop's Castle          | .. E. Griffiths, Esq.                 | .. 52 30 0         | 3 0 0               |
| (3)  | 700                | Totterton, Lydbury North | .. Major W. H. B. Whitaker            | .. 52 5 0          | 2 56 30             |
| (4)  | 698                | Reservoir, Oswestry      | .. G. W. Lacey, Esq.                  | .. 52 48 0         | 3 3 0               |
| (5)  | 582                | Church Stretton          | .. Mr. E. J. Marsh                    | .. 52 30 49        | 2 49 33             |
| (6)  | 570                | Longden Manor            | ... W. Swire, Esq., C.B.E.            | ... 52 38 45       | 2 50 50             |
| (7)  | 509                | Bitterley                | .. Prebendary J. R. Burton            | .. 52 23 40        | 2 38 0              |
| (8)  | 490                | Chirbury                 | .. Lt.-Col. S. D. Price Davies        | .. 52 34 0         | 3 4 0               |
| (9)  | 460                | Alveley                  | .. Capt. H. D. Wakeman Colville, R.N. | .. 52 28 20        | 2 20 0              |
| (10) | 450                | Oswestry                 | .. E. Compton, Esq.                   | .. 52 48 0         | 3 3 0               |
| (11) | 370                | Diddlebury               | .. V. S. Wrigley, Esq.                | .. 52 27 25        | 2 43 30             |
| (12) | 350                | Norton-in-Hales          | .. C. Chadwick, Esq.                  | .. 52 56 30        | 2 26 30             |
| (13) | 350                | Dorrington               | .. Mr. J. A. Narraway                 | .. 52 37 0         | 2 45 0              |

TABLE No. 1—continued.

| NO.  | ALTITUDE.<br>FEET. | STATION.                | OBSERVER.                               | LATITUDE.<br>° ' " | LONGITUDE.<br>° ' " |
|------|--------------------|-------------------------|-----------------------------------------|--------------------|---------------------|
| (14) | 320                | Bromfield               | .. F. Brayshaw, Esq. (Warwick House) .. | 52 23 10           | 2 45 40             |
| (15) | 300                | Oakly Park              | .. Mr. J. R. Francis ..                 | 52 22 50           | 2 45 20             |
| (16) | 290                | Sansaw                  | .. Mr. J. Clark ..                      | 52 48 0            | 2 43 30             |
| (17) | 290                | Cantreyn, Bridgnorth    | .. W. Bayliss, Esq. ..                  | 52 23 30           | 2 25 40             |
| (18) | 283                | Shifnal                 | .. T. F. Chard, Esq. ..                 | 52 40 11           | 2 31 30             |
| (19) | 280                | Newport                 | .. Col. R. Leeke ..                     | 52 46 40           | 2 32 30             |
| (20) | 271                | Whitchurch              | .. Mr. W. Sowden ..                     | 52 56 30           | 2 45 0              |
| (21) | 252                | Shrewsbury (Copthorne)  | .. Mr. W. H. Purslow ..                 | 52 42 30           | 2 46 40             |
| (22) | 238                | Fitz Rectory            | .. Rev. W. Brewster ..                  | 52 45 20           | 2 49 10             |
| (23) | 235                | Radbrook, Shrewsbury    | .. D. D. Macpherson, Esq. ..            | 52 42 0            | 2 46 45             |
| (24) | 211                | Harper Adams College    | ... The Principal ...                   | 52 46 0            | 2 36 0              |
| (25) | 208                | Roden                   | .. J. W. Nowell, Esq. ..                | 52 44 30           | 2 37 40             |
| (26) | 190                | Shrewsbury (Coton Hill) | .. Dr. M. Gepp ..                       | 52 42 40           | 2 45 55             |
| (27) | 185                | do. (Monkmoor           | ... Mr. H. Howes. ...                   | 52 43 10           | 2 43 10             |
| (28) | 185                | do. (Abbey Foregate)    | Mr. G. Nicholas                         | ... 52 42 17       | 2 44 21             |

**TABLE No. 2.**  
**MONTHLY RAINFALL IN INCHES.**

|      |                        | JAN. | FEB. | MAR. | APL. | MAY. | JUNE. | JULY. | AUG. | SEPT. | OCT. | NOV. | DEC. | TOTAL              |
|------|------------------------|------|------|------|------|------|-------|-------|------|-------|------|------|------|--------------------|
| (1)  | Burwarton ...          | 1.10 | 0.66 | 0.13 | 1.49 | 4.54 | 3.23  | 2.22  | 1.73 | 0.87  | 5.24 | 7.84 | 6.78 | 35.83              |
| (2)  | Bishop's Castle ...    | 1.50 | 0.93 | 0.29 | 0.96 | 2.57 | 2.28  | 2.76  | 1.77 | 1.89  | 4.09 | 7.94 | 9.15 | 36.13              |
| (3)  | Totterton ..           | 1.05 | 0.86 | 0.27 | 0.76 | 2.18 | 2.31  | 2.31  | 1.75 | 1.55  | 3.60 | 5.62 | 6.06 | 28.32              |
| (4)  | Oswestry Reservoir ... | 1.52 | 1.02 | 0.33 | 0.90 | 2.17 | 2.43  | 2.38  | 2.45 | 1.82  | 4.65 | 7.88 | 7.76 | 35.31              |
| (5)  | Church Stretton ...    | 2.29 | 0.81 | 0.38 | 1.29 | 2.57 | 3.18  | 2.27  | 2.16 | 1.32  | 4.84 | 8.24 | 7.10 | 36.45              |
| (6)  | Longden Manor ...      | 1.02 | 0.94 | 0.52 | 0.68 | 2.05 | 2.60  | 2.05  | 2.28 | 1.47  | 3.38 | 6.40 | 6.66 | 30.05 <sup>2</sup> |
| (7)  | Bitterley ...          | 0.97 | 0.27 | 0.08 | 1.06 | 2.19 | 2.69  | 2.09  | 1.47 | 0.76  | 4.19 | 5.27 | 5.13 | 26.17              |
| (8)  | Chirbury ...           | 1.26 | 0.77 | 0.27 | 0.72 | 1.59 | 2.21  | 2.29  | 1.82 | 1.24  | 3.63 | 6.26 | 6.98 | 29.04              |
| (9)  | Alveley ...            | 1.58 | 0.60 | 0.10 | 0.66 | 2.31 | 2.20  | 1.60  | 1.58 | 0.84  | 3.90 | 6.83 | 5.75 | 27.95              |
| (10) | Oswestry ...           | 1.76 | 0.84 | 0.32 | 0.81 | 2.14 | 2.51  | 2.40  | 2.24 | 1.95  | 4.63 | 7.91 | 7.91 | 35.42              |
| (11) | Diddlebury ...         | 1.37 | 0.69 | 0.21 | 0.88 | 2.29 | 2.68  | 2.02  | 2.40 | 1.07  | 4.17 | 6.37 | 6.66 | 30.81              |
| (12) | Norton-in-Hales        | 1.53 | 1.01 | 0.53 | 0.70 | 1.84 | 2.06  | 2.04  | 3.65 | 1.02  | 5.43 | 5.55 | 4.66 | 30.02              |
| (13) | Dorrington ...         | 1.67 | 0.45 | 0.43 | 0.62 | 2.13 | 1.90  | 3.21  | 1.12 | 1.34  | 3.18 | 6.42 | 6.97 | 29.44              |
| (14) | Bromfield ...          | 1.52 | 0.65 | 0.16 | 0.74 | 2.94 | 2.82  | 1.72  | 1.34 | 1.04  | 4.85 | 6.72 | 6.87 | 31.37              |
| (15) | do. Oakly Park         | 1.58 | 0.57 | 0.13 | 0.66 | 2.99 | 2.63  | 1.85  | 1.08 | 0.90  | 4.54 | 6.65 | 6.69 | 30.27              |



# TABLE No. 3. GREATEST RAINFALL IN 24 HOURS, WITH DATES.

|                                    | Jan. | Day | Feb. | Day | Mar. | Day | Apr. | Day | May | Day | June | Day | July | Day | Aug. | Day | Sept. | Day | Oct. | Day | Nov. | Day | Dec. | Day |
|------------------------------------|------|-----|------|-----|------|-----|------|-----|-----|-----|------|-----|------|-----|------|-----|-------|-----|------|-----|------|-----|------|-----|
| (1) Burwarton ...                  | .25  | 28  | .55  | 2   | .13  | 22  | .28  | 4   | .95 | 6   | .94  | 12  | .54  | 31  | .33  | 3   | .45   | 3   | 1.78 | 5   | 1.05 | 11  | 1.04 | 28  |
| (2) Bishop's Castle ...            | .58  | 31  | .22  | 11  | .19  | 21  | .18  | 27  | .74 | 5   | .93  | 12  | .77  | 12  | .42  | 3   | .60   | 12  | 1.10 | 5   | 1.12 | 11  | 1.31 | 6   |
| (3) Totterton ...                  | .38  | 31  | .20  | 2   | .22  | 21  | .12  | 27  | .80 | 5   | —    | —   | .58  | 12  | .40  | 3   | .43   | 3   | 1.25 | 5   | .95  | 11  | .70  | 9   |
| (4) Oswestry Resvr.                | .46  | 28  | .39  | 2   | .26  | 21  | .17  | 27  | .51 | 5   | .71  | 12  | .69  | 5   | .50  | 3   | .69   | 23  | 1.06 | 5   | 1.04 | 11  | 1.08 | 28  |
| (5) Church Stretton                | .56  | 28  | .19  | 2   | .25  | 21  | .27  | 12  | .91 | 5   | 1.24 | 12  | .57  | 28  | .50  | 3   | .43   | 30  | 1.69 | 5   | 1.17 | 11  | .80  | 6   |
| (6) Longden Manor                  | .35  | 29  | .41  | 1   | .34  | 21  | .19  | 13  | .56 | 6   | .50  | 12  | .63  | 12  | .46  | 6   | .50   | 12  | 1.21 | 5   | .83  | 19  | .93  | 7   |
| (7) Bitterley ...                  | .27  | 31  | .12  | 25  | .08  | 21  | .33  | 12  | .77 | 7   | .68  | 14  | .56  | 4   | .31  | 5   | .39   | 30  | 1.12 | 5   | .86  | 18  | .74  | 28  |
| (8) Chirbury ...                   | .38  | 27  | .18  | 2   | .18  | 21  | .23  | 12  | .47 | 6   | .75  | 12  | .48  | 5   | .40  | 5   | .42   | 12  | 1.40 | 5   | 1.04 | 10  | .78  | 4   |
| (9) Alveley ...                    | .46  | 31  | .25  | 2   | .05  | 21  | .18  | 27  | .67 | 5   | .61  | 12  | .34  | 28  | .48  | 3   | .40   | 30  | 1.82 | 5   | 1.22 | 11  | .64  | 4   |
| (10) Oswestry ...                  | .46  | 28  | .30  | 2   | .30  | 21  | .21  | 27  | .68 | 5   | .80  | 12  | .65  | 31  | .45  | 3   | 1.03  | 30  | 1.02 | 5   | 1.01 | 11  | 1.04 | 28  |
| (11) Diddlebury ...                | .41  | 28  | .28  | 2   | .05  | 25  | .19  | 12  | .81 | 5   | .99  | 12  | .49  | 5   | 1.00 | 16  | .64   | 3   | 1.70 | 5   | .75  | 24  | .78  | 28  |
| (12) Norton-in-Hales               | .33  | 28  | .30  | 8   | .24  | 21  | .16  | 4   | .43 | 7   | .47  | 14  | .57  | 5   | .35  | 3   | —     | —   | 1.08 | 5   | 1.20 | 11  | .75  | 28  |
| (13) Dorrington ...                | .52  | 6   | .16  | 1   | .29  | 20  | .13  | 3   | .59 | 4   | .80  | 11  | .60  | 4   | .45  | 2   | .50   | 29  | 1.63 | 5   | .90  | 9   | .80  | 5   |
| (14) Bromfield ...                 | .47  | 28  | .24  | 2   | .10  | 21  | .17  | 27  | .86 | 5   | 1.16 | 12  | .33  | 5   | .33  | 5   | .60   | 3   | 2.05 | 5   | .73  | 11  | .84  | 28  |
| (15) do. Oakly Park                | .47  | 28  | .25  | 2   | .10  | 21  | .20  | 27  | .88 | 5   | 1.12 | 12  | .42  | 4   | .27  | 3   | .46   | 3   | 1.80 | 5   | .79  | 18  | 1.10 | 8   |
| (16) Sansaw ...                    | .35  | 28  | .20  | 8   | .42  | 21  | .26  | 4   | .44 | 5   | .50  | 12  | .44  | 22  | .60  | 3   | .54   | 30  | 1.15 | 5   | 1.11 | 11  | .61  | 28  |
| (17) Cantreyn,<br>Bridgnorth ...   | .35  | 28  | .30  | 2   | .10  | 21  | .21  | 27  | .65 | 5   | .78  | 12  | .38  | 4   | .39  | 3   | .36   | 3   | 1.65 | 5   | .94  | 11  | .73  | 28  |
| (18) Shifnal ...                   | .50  | 28  | .25  | 1   | .08  | 20  | .43  | 27  | .32 | 11  | .66  | 11  | .50  | 13  | .43  | 2   | .24   | 30  | 1.26 | 5   | 1.20 | 28  | 1.15 | 28  |
| (19) Newport ...                   | .45  | 28  | .24  | 2   | .26  | 21  | .16  | 4   | .58 | 5   | .65  | 14  | .35  | 31  | .54  | 5   | .30   | 3   | 1.17 | 5   | 1.13 | 11  | .55  | 28  |
| (20) Whitchurch ...                | .22  | 27  | .36  | 8   | .21  | 21  | .25  | 4   | .60 | 4   | .37  | 12  | .46  | 5   | .50  | 3   | .83   | 30  | 1.00 | 5   | .90  | 11  | .71  | 4   |
| (21) Shrewsbury,<br>Cophthorne ... | .27  | 28  | .14  | 8   | .29  | 21  | .18  | 4   | .47 | 5   | .59  | 12  | .46  | 12  | .67  | 5   | .33   | 3   | 1.07 | 5   | .94  | 11  | .56  | 8   |
| (22) Fitz ...                      | —    | —   | —    | —   | —    | —   | —    | —   | —   | —   | —    | —   | —    | —   | —    | —   | —     | —   | —    | —   | —    | —   | —    | —   |
| (23) Radbrook, Shr'y               | .28  | 28  | .15  | 8   | .30  | 21  | .16  | 4   | .48 | 5   | .56  | 12  | .50  | 5   | .62  | 5   | .30   | 30  | .96  | 5   | .91  | 11  | .60  | 6   |
| (24) Harper Adams<br>College ...   | .38  | 28  | .20  | 2   | .31  | 21  | .16  | 5   | .42 | 5   | .49  | 12  | .49  | 31  | .72  | 5   | .33   | 3   | 1.12 | 5   | 1.24 | 11  | .50  | 28  |
| (25) Roden ...                     | .28  | 28  | .20  | 2   | .28  | 21  | .20  | 4   | .55 | 5   | .73  | 12  | .43  | 5   | .79  | 5   | .37   | 3   | 1.18 | 5   | .88  | 11  | .57  | 8   |
| (26) Shrewsbury,<br>Coton Hill ... | .25  | 28  | .15  | 8   | .23  | 21  | .18  | 4   | .47 | 5   | .54  | 12  | .46  | 5   | .69  | 5   | .38   | 3   | 1.03 | 5   | .90  | 11  | .52  | 6   |
| (27) Shrewsbury,<br>Monkmoor Hosp. | —    | —   | —    | —   | —    | —   | —    | —   | —   | —   | —    | —   | .38  | 5   | .75  | 5   | .36   | 3   | 1.27 | 5   | .91  | 11  | .58  | 6   |
| (28) Shrewsbury,<br>Abbey Foregate | —    | —   | —    | —   | —    | —   | —    | —   | —   | —   | —    | —   | —    | —   | —    | —   | .42   | 3   | 1.17 | 5   | .83  | 11  | .48  | 6   |

# TABLE No. 4.

## RAINY DAYS.

A Rainy Day means a day in which at least .01 of rain fell.

|                        | JAN. | FEB. | MAR. | APR. | MAY. | JUNE. | JULY. | AUG. | SEP. | OCT. | NOV. | DEC. | TOTAL |
|------------------------|------|------|------|------|------|-------|-------|------|------|------|------|------|-------|
| (1) Burwarton          | ...  | 8    | 3    | 1    | 11   | 10    | 12    | 8    | 15   | 4    | 17   | 21   | 131   |
| (2) Bishop's Castle    | ...  | 13   | 9    | 3    | 11   | 9     | 13    | 13   | 18   | 6    | 19   | 24   | 159   |
| (3) Totterton          | ...  | 11   | 9    | 2    | 11   | 10    | 12    | 17   | 7    | 7    | 23   | 23   | 158   |
| (4) Oswestry Reservoir | ...  | 13   | 12   | 5    | 12   | 13    | 15    | 15   | 20   | 9    | 18   | 24   | 179   |
| (5) Church Stretton    | ...  | 16   | 13   | 5    | 13   | 10    | 13    | 15   | 7    | 20   | 24   | 25   | 174   |
| (6) Longden Manor      | ...  | 13   | 6    | 4    | 11   | 8     | 14    | 12   | 18   | 9    | 18   | 23   | 161   |
| (7) Bitterley          | ...  | 12   | 4    | 1    | 8    | 8     | 13    | 9    | 16   | 4    | 14   | 18   | 131   |
| (8) Chirbury           | ...  | 11   | 8    | 3    | 11   | 9     | 12    | 10   | 12   | 6    | 19   | 21   | 147   |
| (9) Alveley            | ...  | 13   | 6    | 3    | 10   | 12    | 13    | 11   | 16   | 6    | 13   | 21   | 146   |
| (10) Oswestry          | ...  | 15   | 9    | 3    | 11   | 10    | 12    | 12   | 26   | 8    | 18   | 23   | 170   |
| (11) Diddlebury        | ...  | 14   | 8    | 4    | 12   | 11    | 14    | 11   | 14   | 5    | 19   | 24   | 159   |
| (12) Norton-in-Hales   | ...  | 17   | 10   | 4    | 9    | 13    | 15    | 13   | 21   | 6    | 18   | 24   | 175   |
| (13) Dorrington        | ...  | 11   | 6    | 4    | 8    | 10    | 8     | 15   | 8    | 8    | 16   | 24   | 143   |

TABLE No. 4—continued.

|                             | JAN.   | FEB. | MAR. | APR. | MAY. | JUNE | JULY. | AUG. | SEP. | OCT. | NOV. | DEC. | TOTAL.   |
|-----------------------------|--------|------|------|------|------|------|-------|------|------|------|------|------|----------|
| (14) Bromfield              | ... 12 | 8    | 2    | 11   | 13   | 14   | 9     | 15   | 4    | 18   | 22   | 26   | 154      |
| (15) do. (Oakly Park)       | ... 9  | 4    | 2    | 7    | 10   | 11   | 8     | 12   | 4    | 17   | 23   | 23   | 130      |
| (16) Sansaw                 | ... 18 | 7    | 3    | 10   | 14   | 15   | 12    | 18   | 9    | 17   | 24   | 25   | 172      |
| (17) Cantreyn, Bridgnorth   | ... 12 | 6    | 2    | 9    | 13   | 12   | 12    | 15   | 4    | 16   | 21   | 21   | 143      |
| (18) Shifnal                | ... 11 | 4    | 3    | 12   | 11   | 11   | 11    | 12   | 5    | 13   | 20   | 20   | 133      |
| (19) Newport                | ... 14 | 7    | 4    | 11   | 11   | 12   | 12    | 18   | 7    | 17   | 22   | 22   | 157      |
| (20) Whitchurch             | ... 11 | 7    | 3    | 10   | 9    | 14   | 12    | 22   | 7    | 21   | 22   | 22   | 160      |
| (21) Shrewsbury, Copthorne  | ... 13 | 8    | 4    | 10   | 7    | 11   | 14    | 17   | 7    | 16   | 22   | 22   | 151      |
| (22) Fitz                   | ... 12 | 10   | 5    | 9    | 10   | 13   | 12    | 16   | 5    | 16   | 22   | 22   | 152      |
| (23) Radbrook, Shrewsbury   | ... 13 | 8    | 7    | 13   | 11   | 13   | 14    | 22   | 7    | 18   | 22   | 23   | 171      |
| (24) Harper Adams College   | ... 11 | 7    | 4    | 10   | 10   | 13   | 13    | 19   | 5    | 19   | 22   | 25   | 158      |
| (25) Roden                  | ... 13 | 8    | 4    | 14   | 11   | 12   | 13    | 18   | 6    | 16   | 22   | 25   | 162      |
| (26) Shrewsbury, Coton Hill | ... 14 | 9    | 5    | 12   | 9    | 14   | 14    | 17   | 5    | 15   | 23   | 22   | 159      |
| (27) do. Monkmoor Hosp'l.   | —      | —    | —    | —    | —    | —    | 14    | 16   | 7    | 16   | 22   | 22   | —        |
| (28) do. Abbey Foregate     | ... —  | —    | —    | —    | —    | —    | —     | —    | 6    | 16   | 22   | 23   | —        |
| Total for year              |        |      |      |      |      |      |       |      |      |      |      |      | ... 4035 |
| Average for year            |        |      |      |      |      |      |       |      |      |      |      |      | ... 155  |

TABLE No. 5.

## TEMPERATURES—HIGHEST AND LOWEST, WITH DATES.

| HIGHEST TEMPERATURE ; DEGREES FAHRENHEIT. |       |       |          |          |          |          |          |       |          |          |          |          |  |
|-------------------------------------------|-------|-------|----------|----------|----------|----------|----------|-------|----------|----------|----------|----------|--|
|                                           | Jan.  | Feb.  | Mar.     | April    | May      | June     | July     | Aug.  | Sept.    | Oct.     | Nov.     | Dec.     |  |
| (1) Burwarton ...                         | 56 31 | 50 1  | 75 28    | 69 19    | 76 23-27 | 80 19    | 88 16    | 81 26 | 89 8     | 69 1     | 58 8     | 53 13    |  |
| (6) Longden Manor ...                     | 49 31 | 51 1  | 71 28    | 65 14-20 | 73 21-23 | 75 19    | 84 16    | 75 30 | 82 8     | 65 12    | 57 12    | 55 13-14 |  |
| (12) Norton-in-Hales ...                  | 52 30 | 53 1  | 67 10    | 63 18    | 77 23    | 77 19    | 84 16    | 74 10 | 75 8     | 63 12    | 54 25    | 55 15    |  |
| (15) Bromfield (Oakly Park) ...           | 54 30 | 52 1  | 74 28    | 71 19    | 76 24    | 76 19    | 86 16    | 78 27 | 85 8     | 68 12    | 56 11    | 57 13    |  |
| (16) Sansaw ...                           | 52 30 | 52 1  | 70 27-28 | 71 19    | 75 23-27 | 75 18-19 | 83 16    | 75 27 | 72 7     | 61 11-12 | 52 7-19  | 52 13-14 |  |
| (17) Cantrey, B'north...                  | 52 30 | 52 1  | 71 29    | 74 19    | 83 23    | 82 19    | 89 16-21 | 82 27 | 84 8     | 66 11-12 | 58 1     | 55 14    |  |
| (18) Shifnal ...                          | 53 30 | 52 1  | 75 2     | 73 20    | 94 24    | 76 20    | 84 22    | 84 30 | 88 9     | 69 12    | 66 7     | 57 1-14  |  |
| (24) Harper Adams Coll.                   | 53 30 | 52 1  | 70 28-29 | 68 19    | 73 23    | 74 19    | 86 16    | 77 27 | 82 8     | 63 12    | 57 11    | 56 13    |  |
| (25) Roden ...                            | 53 29 | 51 1  | 71 29    | 70 19    | 74 23    | 74 18    | 87 16    | 77 27 | 84 8     | 65 12    | 56 6-7   | 59 10    |  |
| (27) Shrewsbury Monk-moor Hospital ...    | — —   | — —   | — —      | — —      | — —      | — —      | 86 16    | 76 27 | 82 8     | 63 11-12 | 57 7-19  | 58 13    |  |
| (28) Do. Abbey Foregate                   | — —   | — —   | — —      | — —      | — —      | — —      | — —      | — —   | 82 8     | 63 12    | 58 11    | 57 13    |  |
| LOWEST TEMPERATURE ; DEGREES FAHRENHEIT.  |       |       |          |          |          |          |          |       |          |          |          |          |  |
|                                           | Jan.  | Feb.  | Mar.     | April    | May      | June     | July     | Aug.  | Sept.    | Oct.     | Nov.     | Dec.     |  |
| (1) Burwarton ...                         | 22 16 | 10 14 | 19 2     | 26 5     | 39 30    | 40 10-25 | 42 6     | 40 18 | 37 30    | 29 26-31 | 26 14-17 | 27 17-21 |  |
| (6) Longden Manor ...                     | 27 7  | 8 15  | 18 1     | 28 6     | 32 3     | 40 5     | 45 7-8   | 45 8  | 43 14    | 30 26    | 29 18    | 28 22    |  |
| (12) Norton-in-Hales ...                  | 21 27 | 16 14 | 25 18    | 25 22    | 32 1     | 35 5     | 41 13    | 40 9  | 33 14    | 25 27    | 20 18    | 25 22    |  |
| (15) Bromfield (Oakly Park) ...           | 17 27 | — —   | 7 1      | 20 21    | 27 3     | 30 5     | 35 7     | 34 16 | 32 26    | 22 27    | 18 1     | 21 17    |  |
| (16) Sansaw ...                           | 24 27 | 10 15 | 19 2     | 29 6     | 34 2     | 40 5     | 46 13    | 44 19 | 41 26    | 30 27    | 25 18    | 27 22    |  |
| (17) Cantrey, B'north...                  | 19 26 | 6 14  | 14 1     | 23 20-21 | 27 1     | 32 4     | 42 6     | 35 15 | 33 13-30 | 20 31    | 20 14    | 24 21    |  |
| (18) Shifnal ...                          | 22 27 | 11 14 | 19 1     | 37 12    | 29 4     | 34 5     | 44 13    | 34 19 | 32 26    | 30 25    | 24 14-15 | 27 18    |  |
| (24) Harper Adams Coll.                   | 28 18 | 10 15 | 15 1     | 23 21    | 32 3     | 32 5     | 41 13-26 | 38 16 | 34 14    | 26 27    | 22 15    | 28 16    |  |
| (25) Roden ...                            | 22 27 | 7 14  | 9 1      | 23 21    | 29 3     | 31 5     | 39 13    | 37 26 | 31 27    | 45 31    | 19 18    | 23 22    |  |
| (27) Shrewsbury, Monk-moor Hospital       | — —   | — —   | — —      | — —      | — —      | — —      | 41 13    | 39 19 | 36 25-27 | 27 27    | 20 15    | 25 22    |  |
| (28) do. Abbey Foregate                   | — —   | — —   | — —      | — —      | — —      | — —      | — —      | — —   | 36 27    | 30 27    | 25 1-19  | 27 22    |  |